

Case No. MEM-0005

REMARKS

Claims 1 – 53 are pending in the present Application. Claims 1 and 40 - 44 have been amended leaving Claims 1 – 53 for consideration upon entry of the present Amendment. The Specification has been amended to correct certain typographical errors, as explained in detail below. No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Claim Objections

Claims 40-44 stand objected to as allegedly containing informalities. Claims 40-44 have been amended to be consistent with product by process type claims as suggested by the Examiner thereby rendering the objection moot.

Claim Rejections Under 35 U.S.C. § 102(b)

Claims 1-15, 22, 24, 39, 41, 43-51 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by U.S. Pat. No. 6,258,182 to Schetky et al. (Schetky) (Office Action dated June 17, 2005 page 2). Applicants respectfully traverse this rejection.

The Examiner states that Schetky teaches a beta phase titanium alloy which overlaps or touches the boundary of the composition in instant claim 1. (Office Action dated June 17, 2005 page 2). The Examiner further states that because Schetky et al. teach a substantially overlapping alloy composition, processed in a substantially similar method, then substantially the same properties, such as elastic recovery are inherently present. (Office Action dated June 17, 2005 page 3).

To anticipate a claim, a reference must disclose each and every element of the claim. *Lewmar Marine v. Barient Inc.*, 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987).

Schetky discloses a substantially nickel-free beta phase titanium alloy comprising between 10.0–12.0 wt% Mo, 2.8-4.0 wt% Al, 0.0-2.0 wt% Cr and V, 0.0-4.0 wt % Nb, with the balance being titanium.

Claim 1 as presently amended is directed to an article manufactured from a composition

Case No. MEM-0005

comprising about 8 to about 9.75 wt% molybdenum, about 2.8 to about 6 wt% aluminum, up to about 2 wt% chromium, up to about 2 wt% vanadium, up to about 4 wt% niobium, with the balance being titanium, wherein the weight percents are based on the total weight of the alloy composition.

Since Schetky teaches an article having 10 to 12 wt% molybdenum while the claims are directed to a composition having about 8 to about 9.75 wt% molybdenum, Schetky does not teach all limitations of the claimed invention and cannot anticipate the claimed invention. Applicants respectfully request a withdrawal of the § 102 (b) rejection and an allowance of the claims.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-15, 22-24, 26-28, 32-35, and 37-52 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Schetky. (Office Action dated June 17, 2005 page 4). Applicants respectfully traverse this rejection.

Examiner states that Schetky et al. disclose examples within the instant composition range and cites specifically Table III and alloys 27, 28, and 36. (Office Action dated June 17, 2005 page 4).

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

An Applicant can rebut a presumption of obviousness based on a claimed invention that falls within a prior art range by showing "(1) [t]hat the prior art taught away from the

Case No. MEM-0005

claimed invention...or (2) that there are new and unexpected results relative to the prior art.” *Iron Grip Barbell Co., Inc. v. USA Sports, Inc.*, 392 F.3d 1317, 1322, 73 U.S.P.Q.2d 1225, 1228 (Fed. Cir. 2004).

As noted above, Schetky does not teach all elements of the claimed invention.

Further, there is no motivation to modify Schetky to arrive at the claimed invention. Applicants respectfully submit that Schetky teaches away from the claimed compositions. Table III and the disclosed alloys cited by the Examiner, in fact, teach away from compositions having a molybdenum content of less than 10 wt%. Table III discloses alloys #27 and #36 comprising 9.5 wt% and 8.4 wt% Mo, respectively, but these alloys failed to display either pseudo-elastic strain recovery or shape memory strain recovery. (Col. 7, ll. 50-52). Although alloy # 28, comprising 10.0 wt% Mo, did display pseudo-elastic strain recovery, its pseudo-elastic strain recovery properties were reduced compared to alloy # 42, comprising 10.2 wt% Mo, which exhibited the highest pseudo-elastic strain recovery of the fifteen alloys screened. (Col. 7, ll. 13-15). A person of ordinary skill in the art would interpret this disclosure to suggest that a titanium alloy within the disclosed composition range having less than 10.0 wt% Mo would fail to exhibit significant pseudo-elastic strain recovery.

For this reason at least, Applicants believe that the Examiner has not made a prima facie case of obviousness over Schetky. Applicants respectfully request a withdrawal of the rejection and an allowance of the claims.

Claims 16-21, 29-31, and 53 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Schetky et al. in view of U.S. Pat. No. 5,658,207 to Aizawa et al. (Office Action dated June 17, 2005 page 7).

Claims 25 and 36 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Schetky et al. in view of U.S. Pat. No. 6,238,491 to Davidson et al. (Office Action dated June 17, 2005 page 7). Applicants respectfully traverse these rejections.

Aizawa et al. disclose a metal golf club head comprising a recess portion with a closed bottom formed in a bottom surface of a hollow metal shell and a sole plate. (Abstract).

Aizawa et al. disclose that the golf club head has a hollow shell cast of metal, such as stainless

Case No. MEM-0005

steel, a titanium alloy, and an aluminum alloy. (Col. 1, ll. 7-10).

Davidson et al. disclose a device or implant at least partially fabricated from a metal alloy comprising between about 29 and 70 wt% Nb; between about 10 and 46 wt% Zr; between about 3 and 15 wt% Mo; and a balance of titanium. (Abstract). Davidson et al. disclose a device or implant that can further comprise a polymeric coating. (Col. 13, ll. 40-46).

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Establishing a prima facie case of obviousness requires that all elements of the invention be disclosed in the prior art. *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970).

As described above, Schetky does not teach all elements of the claimed invention. Neither Aizawa et al. nor Davidson et al. remedy these deficiencies. Because the combined teachings of Schetky et al. and either Aizawa et al. or Davidson et al. fail to teach or suggest all elements of the claimed compositions, the cited references cannot render the claimed compositions obvious. Applicants respectfully request a withdrawal of the obviousness rejection and allowance of the claims.

Double Patenting Rejections

Claims 26-38 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 28-40 of copending Application No. 10/755085. (Office Action dated June 17, 2005 page 8).

Claims 1-52 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1-39 of copending Application No. 10/609003. (Office Action dated June 17, 2005 page 9).

Claims 1-52 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1-49 of copending Application No. 10/755034. (Office Action dated June 17, 2005 page 9).

Claims 1-52 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 15-24 of

Case No. MEM-0005

copending Application No. 10/869359. (Office Action dated June 17, 2005 pp. 9-10).

Claims 1-52 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims of copending Application No. 10/755085. (Office Action dated June 17, 2005 page 10).

Applicants respectfully request that the examiner withdraw the "provisional" obviousness-type double patenting rejections until the claims are in final form and condition for allowance; until such time, there is no double patenting and no way to determine double patenting. MPEP § 804.01.I(B)(1).

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance are requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

CANTOR COLBURN LLP

By


David E. Rodrigues
Registration No. 50,604

Date: December 19, 2005
CANTOR COLBURN LLP
55 Griffin Road South
Bloomfield, CT 06002
Telephone (860) 286-2929
Facsimile (860) 286-0115
Customer No.: 23413